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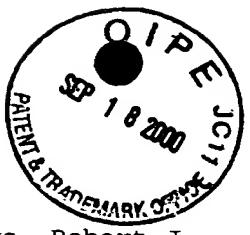
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SEQUENCE LISTING

<110> De Leys, Robert J.
Zheng, Jian

<120> PEPTIDES FOR THE DETECTION OF HIV-1 GROUP O

<130> CDS-222

<140> 09/605,573
<141> 1999-06-28

<160> 70

<170> PatentIn Ver. 2.0

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Leu Trp Gly Cys Lys Gly Lys Leu Val Cys Tyr Thr Ser Val Lys Trp
20 25 30

Asn

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Leu Trp Gly Cys Lys Gly Arg Leu Ile Cys Tyr Thr Ser Val Lys Trp
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<213> Human immunodeficiency virus type 1

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Arg Leu Leu Ala Leu Glu Thr Leu Ile Gln Asn Gln Gln Leu Leu Asn
1 5 10 15

Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser Val Glu Trp
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Asn

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<213> Human immunodeficiency virus type 1

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Arg Leu Leu Ala Leu Glu Thr Leu Ile Gln Asn Gln Gln Leu Leu Asn
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Ser Trp Gly Cys Lys Gly Arg Gln Val Cys Tyr Thr Ser Val Lys Trp
20 25 30
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<213> Human immunodeficiency virus type 1

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Arg Leu Leu Ala Leu Glu Thr Leu Ile Gln Asn Gln Gln Leu Leu Asn
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<213> Human immunodeficiency virus type 1

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Arg Leu Leu Ala Leu Glu Thr Leu Met Gln Asn Gln Gln Leu Leu Asn
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Leu Trp Gly Cys Lys Gly Arg Ile Leu Cys Tyr Thr Ser Val Lys Trp
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Asn

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Arg Leu Leu Ala Leu Glu Thr Leu Ile Gln Asn Gln Gln Leu Leu Asn

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Leu Trp Gly Cys Lys Gly Arg Ile Val Cys Tyr Thr Ser Val Arg Trp
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Asn

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<213> Human immunodeficiency virus type 1

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Arg Leu Leu Ala Leu Glu Thr Leu Ile Gln Asn Gln Gln Leu Leu Asn
1 5 10 15

Leu Trp Gly Cys Lys Gly Lys Ile Val Cys Tyr Thr Ser Val Glu Trp
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Asn

<210> 12

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<213> Human immunodeficiency virus type 1

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Arg Leu Leu Ala Leu Glu Thr Leu Met Gln Asn Gln Gln Leu Leu Asn
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Leu Trp Gly Cys Lys Gly Lys Leu Ile Cys Tyr Thr Ser Val Arg Trp
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Asn

<210> 13

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<213> Human immunodeficiency virus type 1

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Arg Leu Gln Ala Leu Glu Thr Leu Ile Gln Asn Gln Gln Arg Leu Asp
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Arg Leu Leu Ala Leu Glu Thr Phe Ile Gln Asn Gln Gln Leu Leu Asn
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Leu Trp Gly Cys Lys Gly Arg Leu Ile Cys Tyr Thr Ser Val Lys Trp
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Asn

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Arg Leu Leu Ala Leu Glu Thr Leu Ile Gln Asn Gln Gln Leu Leu Asn
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Leu Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser Val Lys Trp
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Asn

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<213> Human immunodeficiency virus type 1

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Arg Leu Gln Ala Leu Glu Thr Leu Met Gln Asn Gln Gln Leu Leu Asn
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Leu Trp Gly Cys Lys Gly Lys Ser Ile Cys Tyr Thr Ser Val Lys Trp
20 25 30

Asn

<210> 18

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<213> Human immunodeficiency virus type 1

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Arg Leu Leu Ala Leu Glu Thr Phe Val Gln Asn Gln Gln Leu Leu Asn
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Leu Trp Gly Cys Lys Gly Arg Ile Val Cys Tyr Thr Ser Val Lys Trp
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<210> 19

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<213> Human immunodeficiency virus type 1

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Arg Leu Leu Ala Leu Glu Thr Leu Met Gln Asn Gln Gln Leu Leu Asn

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<213> Human immunodeficiency virus type 1

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Arg Leu Gln Ala Leu Glu Thr Leu Ile Gln Asn Gln Gln Leu Leu Ser
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Leu Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser Val Lys Trp
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His

<210> 21

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 21

Arg Leu Leu Ala Leu Glu Thr Leu Ile Gln Asn Gln Gln Leu Leu Asn
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Leu Trp Gly Cys Lys Gly Arg Leu Leu Cys Tyr Thr Ser Val Lys Trp
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Asn

<210> 22

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<212> PRT

<213> Human immunodeficiency virus type 1

<400> 22

Arg Leu Leu Ala Leu Glu Thr Phe Ile Gln Asn Gln Gln Leu Leu Asn
1 5 10 15
Leu Trp Gly Cys Lys Gly Lys Leu Ile Cys Tyr Thr Ser Val Glu Trp
20 25 30

Asn

<210> 23

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

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Arg Leu Gln Ala Leu Glu Thr Leu Met Gln Asn Gln Gln Arg Leu Asp
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Leu Trp Gly Cys Lys Gly Arg Leu Ile Cys Tyr Thr Ser Val Lys Trp
20 25 30

Asn

<210> 24

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 24

Arg Leu Gln Ala Leu Glu Pro Leu Ile Gln Asn Gln Gln Arg Leu Ser
1 5 10 15

Leu Trp Gly Cys Lys Gly Arg Ile Ile Cys Tyr Thr Ser Ala Lys Trp
20 25 30

Asn

<210> 25

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 25

Arg Leu Leu Ala Leu Glu Thr Leu Ile Gln Asn Gln Gln Leu Leu Asn
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Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser Val Lys Trp
20 25 30

Asn

<210> 26

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 26

Arg Leu Val Ala Leu Glu Thr Leu Val Gln Asn Gln Gln Leu Leu Asn
1 5 10 15

Leu Trp Gly Cys Lys Gly Arg Leu Thr Cys Tyr Thr Ser Val Lys Trp
20 25 30

Asn

<210> 27

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 27

Arg Leu Leu Ala Leu Glu Thr Leu Ile Gln Asn Gln Gln Leu Leu Asn
1 5 10 15

Leu Trp Gly Cys Lys Gly Arg Leu Leu Cys Tyr Thr Ser Val Lys Trp
20 25 30

Asn

- 10 -

<210> 28

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<213> Human immunodeficiency virus type 1

<400> 28

Arg Leu Leu Ala Leu Glu Thr Phe Ile Gln Asn Gln Gln Leu Leu Asn
1 5 10 15

Leu Trp Gly Cys Lys Gly Gln Leu Val Cys Tyr Thr Ser Val Lys Trp
20 25 30

Asn

<210> 29

<211> 33

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<213> Human immunodeficiency virus type 1

<400> 29

Arg Leu Leu Ala Leu Glu Thr Phe Ile Gln Asn Gln Gln Leu Leu Asn
1 5 10 15

Leu Trp Gly Cys Lys Gly Arg Leu Ile Cys Tyr Thr Ser Val Lys Trp
20 25 30

Asn

<210> 30

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<212> PRT

<213> Human immunodeficiency virus type 1

<400> 30

Arg Leu Leu Ala Leu Glu Thr Leu Ile Gln Asn Gln Gln Leu Leu Asn
1 5 10 15

Ser Trp Gly Cys Lys Gly Arg Ile Val Cys Tyr Thr Ser Val Lys Trp
20 25 30

Asn

<210> 31

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 31

Glu Arg Glu Ile Asp Asn Tyr Thr Ser Leu Ile Tyr Ser Leu Leu Glu
1 5 10 15

Lys Ser Gln Thr Gln Gln Glu Lys Asn Glu Gln Glu Leu Leu Glu Leu
20 25 30

Asp

<210> 32

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 32

Asp Arg Gln Ile Ser Asn Ile Ser Ser Thr Ile Tyr Glu Glu Ile Gln
1 5 10 15

Lys Ala Gln Val Gln Gln Glu Gln Asn Glu Lys Lys Leu Leu Glu Leu
20 25 30

Asp

<210> 33

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 33

Asp Gln His Ile Asn Asn Val Ser Ser Ile Ile Tyr Asp Glu Ile Gln
1 5 10 15

Ala Ala Gln Asp Gln Gln Glu Lys Asn Val Lys Ala Leu Leu Glu Leu
20 25 30

Asp

<210> 34

<211> 33

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<213> Human immunodeficiency virus type 1

<400> 34

Asp Gln Gln Ile Asn Asn Val Ser Ser Phe Ile Tyr Glu Lys Ile Gln
1 5 10 15

Glu Ala Gln Glu Gln Gln Glu Lys Asn Glu Lys Glu Leu Leu Glu Leu
20 25 30

Asp

<210> 35

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 35

Asp Gln Gln Ile Asp Asn Ile Ser Ser Thr Ile Tyr Asp Glu Ile Gln
1 5 10 15

Lys Ala Gln Val Gln Gln Glu Gln Asn Glu Gln Lys Leu Leu Glu Leu
20 25 30

Asp

<210> 36

<211> 33

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<213> Human immunodeficiency virus type 1

<400> 36

Asp Gln Gln Ile Asn Asn Ile Ser Ser Ile Ile Tyr Gly Glu Ile Gln
1 5 10 15

Lys Ala Gln Val Gln Gln Glu Glu Asn Glu Lys Lys Leu Leu Glu Leu
20 25 30

Asp

<210> 37

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 37

Asp Gln Gln Ile Asn Asn Ile Ser Ser Ile Ile Tyr Gly Glu Ile Gln
1 5 10 15

Lys Ala Gln Val Gln Gln Glu His Asn Glu Lys Lys Leu Leu Glu Leu
20 25 30

Asp

<210> 38

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 38

Asp Gln Gln Val Asn Asn Val Ser Ser Phe Ile Tyr Asp Lys Ile Gln
1 5 10 15

Glu Ala Gln Glu Gln Gln Glu Glu Asn Glu Arg Ala Leu Leu Glu Leu
20 25 30

Asp

<210> 39

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 39

Asp Gln Gln Ile Ser Asn Val Ser Ser Ile Ile Tyr Glu Glu Ile Gln
1 5 10 15

Lys Ala Gln Glu Gln Gln Glu Gln Asn Glu Lys Lys Leu Leu Glu Leu
20 25 30

Asp

<210> 40

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 40

Asp Gln Gln Ile Ala Asn Val Ser Ser Phe Ile Tyr Asp Gln Ile Gln
1 5 10 15

Glu Ala Gln Glu Arg Gln Asp Lys Asn Glu Lys Thr Leu Leu Glu Leu
20 25 30

Asp

<210> 41

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 41

Asp Gln Gln Ile Asp Asn Val Ser Ser Thr Ile Tyr Glu Glu Ile Leu
1 5 10 15

Lys Ala Gln Ile Gln Gln Glu Gln Asn Glu Lys Lys Leu Leu Glu Leu
20 25 30

Asp

<210> 42

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 42

Asp Arg Glu Ile Asp Asn Ile Ser Ser Tyr Ile Tyr Glu Lys Ile Gln
1 5 10 15

Glu Ala Gln Asp Gln Gln Glu Asn Asn Glu Arg Glu Leu Leu Glu Leu
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Asp

<210> 43

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 43

Asp Lys Gln Ile Ser Asn Ile Ser Ser Ile Ile Tyr Asp Glu Ile Gln
1 5 10 15

Thr Ala Gln Asp Gln Gln Glu Arg Asn Val Lys Ala Leu Leu Glu Leu
20 25 30

Asp

<210> 44

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 44

Asp Gln Gln Val Asn Asn Val Ser Ser Ile Ile Tyr Glu Glu Ile Gln
1 5 10 15

Arg Ala Gln Val Gln Gln Glu Gln Asn Glu Lys Arg Leu Leu Glu Leu
20 25 30

Asp

<210> 45

<211> 33

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 45

Asp Gln Gln Ile Asp Asn Val Ser Ser Ile Ile Tyr Glu Glu Ile Gln
1 5 10 15

Lys Ala Gln Gly Gln Gln Glu Gln Asn Glu Lys Lys Leu Leu Glu Leu
20 25 30

Asp

<210> 46
<211> 63
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: HIV Consensus Sequence

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attttggaaag cccaggatca acaagaggag aacgttcgtg agttgctgga gctagataaa 60
tgg 63

<210> 47
<211> 58
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: HIV Consensus Sequence

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agcaagttaa caatgtttct tctattatTT atgataAGAT tttggaaGCC caggatca 58

<210> 48
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: HIV Consensus Sequence

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attttggaaag cccaggatca acaagaggag aacgttcgtg agttgctgga gctagataaa 60
tgg 63

<210> 49
<211> 58
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: HIV Consensus Sequence

<400> 49
agcaagttaa caatgtttct tctattatTT atgataAGAT tttggaaGCC caggatca 58

<210> 50
<211> 62
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: HIV Consensus

Sequence

<400> 50

ccagatatcc tccagagact tattagacca agaagcatgc caacggcac tagtataaca 60

aa

62

<210> 51

<211> 62

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: HIV Consensus
Sequence

<400> 51

acattgttaa cttgctggtc ccattgcattc caggtcatgt tatcccagat atcctccaga 60
ga

62

<210> 52

<211> 62

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: HIV Consensus
Sequence

<400> 52

ccagatatcc tccagagact tattagacca agaagcatgc caacggcac tagtataaca 60
aa

62

<210> 53

<211> 62

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: HIV Consensus
Sequence

<400> 53

acattgttaa cttgctggtc ccattgcattc caggtcatgt tatcccagat atcctccaga 60
ga

62

<210> 54

<211> 25

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: HIV Consensus Sequence

<400> 54

accggaattc cgatttcctt gggtt

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<210> 55

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: HIV Consensus Sequence

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cataaaagctt gtcccagaag ttcc

24

<210> 56

<211> 26

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: HIV Consensus Sequence

<400> 56

gccactgcag ccagactatt attgtc

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<210> 57

<211> 439

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: HIV Consensus Sequence

<400> 57

Met Arg Gly Ser Gly Ile Met Val Arg Pro Leu Asn Ser Ile Val Ala
1 5 10 15

Val Ser Gln Asn Met Gly Ile Gly Lys Asn Gly Asp Leu Pro Trp Pro
20 25 30

Pro Leu Arg Asn Glu Phe Lys Tyr Phe Gln Arg Met Thr Thr Thr Ser
35 40 45

Ser Val Glu Gly Lys Gln Asn Leu Val Ile Met Gly Arg Lys Thr Trp
50 55 60

Phe Ser Ile Pro Glu Lys Asn Arg Pro Leu Lys Asp Arg Ile Asn Ile
65 70 75 80

Val Leu Ser Arg Glu Leu Lys Glu Pro Pro Arg Gly Ala His Phe Leu
85 90 95

Ala Lys Ser Leu Asp Asp Ala Leu Arg Leu Ile Glu Gln Pro Glu Leu
100 105 110

Ala Ser Lys Val Asp Met Val Trp Ile Val Gly Gly Ser Ser Val Tyr
115 120 125

Gln Glu Ala Met Asn Gln Pro Gly His Leu Arg Leu Phe Val Thr Arg
130 135 140

Ile Met Gln Glu Phe Glu Ser Asp Thr Phe Phe Pro Glu Ile Asp Leu
145 150 155 160

Gly Lys Tyr Lys Leu Leu Pro Glu Tyr Pro Gly Val Leu Ser Glu Val
165 170 175

Gln Glu Glu Lys Gly Ile Lys Tyr Lys Phe Glu Val Tyr Glu Lys Lys
180 185 190

Gly Ser Arg Ser Ala Arg Leu Leu Ser Gly Ile Val Gln Gln Gln
195 200 205

Asn Asn Leu Leu Arg Ala Ile Glu Ala Gln Gln His Met Leu Gln Leu
210 215 220

Thr Ala Trp Gly Ile Lys Gln Leu Arg Ala Arg Leu Gln Ala Leu Glu
225 230 235 240

Thr Leu Met Gln Asn Gln Gln Arg Leu Asn Ser Trp Gly Cys Lys Gly
245 250 255

Arg Ile Ile Cys Tyr Thr Ser Ala Arg Trp His Ala Ser Trp Ser Asn
260 265 270

Lys Ser Leu Glu Asp Ile Trp Asp Asn Met Thr Trp Met Gln Trp Asp
275 280 285

Gln Gln Val Asn Asn Val Ser Ser Ile Ile Tyr Asp Lys Ile Leu Glu
290 295 300

Ala Gln Asp Gln Gln Glu Glu Asn Val Arg Glu Leu Leu Glu Leu Asp
305 310 315 320

Lys Trp Ala Ser Leu Trp Asn Trp Phe Asp Ile Thr Asn Trp Leu Trp
325 330 335

Tyr Ile Lys Ile Phe Ile Met Ile Val Gly Gly Leu Val Gly Leu Arg
340 345 350

Ile Val Phe Ala Val Leu Ser Ile Val Asn Arg Val Arg Gln Gly Tyr
355 360 365

Ser Pro Leu Ser Leu Gln Thr Arg Pro Pro Val Pro Arg Gly Pro Asp
370 375 380

Arg Pro Glu Gly Ile Glu Glu Gly Gly Glu Arg Asp Arg Asp Thr
385 390 395 400

Ser Gly Arg Leu Val His Gly Phe Leu Ala Ile Ile Trp Val Asp Leu
405 410 415

Gly Pro Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn Ser Ala Val
420 425 430

Asp His His His His His His
435

<210> 58

<211> 368

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:HIV Consensus
Sequence

<400> 58

Met Arg Gly Ser Gly Ile Met Val Arg Pro Leu Asn Ser Ile Val Ala
1 5 10 15

Val Ser Gln Asn Met Gly Ile Gly Lys Asn Gly Asp Leu Pro Trp Pro
20 25 30

Pro Leu Arg Asn Glu Phe Lys Tyr Phe Gln Arg Met Thr Thr Thr Ser
35 40 45

Ser Val Glu Gly Lys Gln Asn Leu Val Ile Met Gly Arg Lys Thr Trp
50 55 60

Phe Ser Ile Pro Glu Lys Asn Arg Pro Leu Lys Asp Arg Ile Asn Ile
65 70 75 80

Val Leu Ser Arg Glu Leu Lys Glu Pro Pro Arg Gly Ala His Phe Leu
85 90 95

Ala Lys Ser Leu Asp Asp Ala Leu Arg Leu Ile Glu Gln Pro Glu Leu
100 105 110

Ala Ser Lys Val Asp Met Val Trp Ile Val Gly Gly Ser Ser Val Tyr
115 120 125

Gln Glu Ala Met Asn Gln Pro Gly His Leu Arg Leu Phe Val Thr Arg
130 135 140

Ile Met Gln Glu Phe Glu Ser Asp Thr Phe Phe Pro Glu Ile Asp Leu
145 150 155 160

Gly Lys Tyr Lys Leu Leu Pro Glu Tyr Pro Gly Val Leu Ser Glu Val
165 170 175

Gln Glu Glu Lys Gly Ile Lys Tyr Lys Phe Glu Val Tyr Glu Lys Lys
180 185 190

Gly Ser Arg Ser Ala Arg Leu Leu Leu Ser Gly Ile Val Gln Gln Gln
195 200 205

Asn Asn Leu Leu Arg Ala Ile Glu Ala Gln Gln His Met Leu Gln Leu
210 215 220

Thr Ala Trp Gly Ile Lys Gln Leu Arg Ala Arg Leu Gln Ala Leu Glu
225 230 235 240

Thr Leu Met Gln Asn Gln Gln Arg Leu Asn Ser Trp Gly Cys Lys Gly
245 250 255

Arg Ile Ile Cys Tyr Thr Ser Ala Arg Trp His Ala Ser Trp Ser Asn
260 265 270

Lys Ser Leu Glu Asp Ile Trp Asp Asn Met Thr Trp Met Gln Trp Asp
275 280 285

Gln Gln Val Asn Asn Val Ser Ser Ile Ile Tyr Asp Lys Ile Leu Glu
290 295 300

Ala Gln Asp Gln Gln Glu Glu Asn Val Arg Glu Leu Leu Glu Leu Asp
305 310 315 320

Lys Trp Ala Ser Leu Trp Asn Trp Phe Asp Ile Thr Asn Trp Leu Trp
325 330 335

Tyr Ile Lys Ile Phe Ile Met Ile Val Gly Pro Glu Gln Lys Leu Ile
340 345 350

Ser Glu Glu Asp Leu Asn Ser Ala Val Asp His His His His His His
355 360 365

<210> 59
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:HIV Consensus Sequence

<400> 59
Asn Gln Gln Arg Leu Asn Ser Trp Gly Cys Lys Gly Arg Ile Ile Cys
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Tyr Thr Ser Ala Arg Trp His
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<210> 60

<211> 23
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<220>
<221> Xaa is any amino acid

<222> 1

<223> Description of Artificial Sequence:HIV Consensus Sequence

<400> 60

Xaa Gln Gln Arg Leu Asn Ser Trp Gly Cys Lys Gly Arg Ile Ile Cys
1 5 10 15

Tyr Thr Ser Ala Arg Trp His
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<210> 61
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:HIV Consensus Sequence

<400> 61
Glu Gln Gln Arg Leu Asn Ser Trp Gly Cys Lys Gly Arg Ile Ile Cys
1 5 10 15

Tyr Thr Ser Ala Arg Trp His
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<210> 62
<211> 28
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<220>
<221> Xaa is any amino acid

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<223> Description of Artificial Sequence:HIV Consensus Sequence

<400> 62

Glu Thr Leu Met Gln Xaa Gln Gln Arg Leu Asn Ser Trp Gly Cys Lys
1 5 10 15

Gly Arg Ile Ile Cys Tyr Thr Ser Ala Arg Trp His
20 25

<210> 63
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<212> PRT
<213> Artificial Sequence

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<221> Xaa is any amino acid

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<223> Description of Artificial Sequence:HIV Consensus
Sequence

<400> 63

Gly Arg Glu Thr Leu Met Gln Xaa Gln Gln Arg Leu Asn Ser Trp Gly
1 5 10 15

Cys Lys Gly Arg Ile Ile Cys Tyr Thr Ser Ala Arg Trp His
20 25 30

<210> 64
<211> 35
<212> PRT
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<220>
<221> Xaa is any amino acid
<222> 13
<223> Description of Artificial Sequence:HIV Consensus
Sequence

<400> 64
Arg Ala Arg Leu Gln Ala Leu Glu Thr Leu Met Gln Xaa Gln Gln Arg
1 5 10 15

Leu Asn Ser Trp Gly Cys Lys Gly Arg Ile Ile Cys Tyr Thr Ser Ala
20 25 30

Arg Trp His
35

<210> 65
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:HIV Consensus

Sequence

<400> 65
Asp Gln Gln Val Asn Asn Val Ser Ser Ile Ile Tyr Asp Lys Ile Leu
1 5 10 15

Glu Ala Gln Asp Gln Gln Glu Glu Asn Val Arg Glu Leu Leu Glu Leu
20 25 30

Asp

<210> 66
<211> 220
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:HIV Consensus
Sequence

<400> 66
Ala Arg Leu Leu Leu Ser Gly Ile Val Gln Gln Gln Asn Asn Leu Leu
1 5 10 15

Arg Ala Ile Glu Ala Gln Gln His Met Leu Gln Leu Thr Ala Trp Gly
20 25 30

Ile Lys Gln Leu Arg Ala Arg Leu Gln Ala Leu Glu Thr Leu Met Gln
35 40 45

Asn Gln Gln Arg Leu Asn Ser Trp Gly Cys Lys Gly Arg Ile Ile Cys
50 55 60

Tyr Thr Ser Ala Arg Trp His Ala Ser Trp Ser Asn Lys Ser Leu Glu
65 70 75 80

Asp Ile Trp Asp Asn Met Thr Trp Met Gln Trp Asp Gln Gln Val Asn
85 90 95

Asn Val Ser Ser Ile Ile Tyr Asp Lys Ile Leu Glu Ala Gln Asp Gln
100 105 110

Gln Glu Glu Asn Val Arg Glu Leu Leu Glu Leu Asp Lys Trp Ala Ser
115 120 125

Leu Trp Asn Trp Phe Asp Ile Thr Asn Trp Leu Trp Tyr Ile Lys Ile
130 135 140

Phe Ile Met Ile Val Gly Gly Leu Val Gly Leu Arg Ile Val Phe Ala
145 150 155 160

Val Leu Ser Ile Val Asn Arg Val Arg Gln Gly Tyr Ser Pro Leu Ser
165 170 175

Leu Gln Thr Arg Pro Pro Val Pro Arg Gly Pro Asp Arg Pro Glu Gly
180 185 190

Ile Glu Glu Glu Gly Gly Glu Arg Asp Arg Asp Thr Ser Gly Arg Leu
195 200 205

Val His Gly Phe Leu Ala Ile Ile Trp Val Asp Leu
210 215 220

<210> 67

<211> 149

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:HIV Consensus
Sequence

<400> 67

Ala Arg Leu Leu Leu Ser Gly Ile Val Gln Gln Gln Asn Asn Leu Leu
1 5 10 15

Arg Ala Ile Glu Ala Gln Gln His Met Leu Gln Leu Thr Ala Trp Gly
20 25 30

Ile Lys Gln Leu Arg Ala Arg Leu Gln Ala Leu Glu Thr Leu Met Gln
35 40 45

Asn Gln Gln Arg Leu Asn Ser Trp Gly Cys Lys Gly Arg Ile Ile Cys
50 55 60

Tyr Thr Ser Ala Arg Trp His Ala Ser Trp Ser Asn Lys Ser Leu Glu
65 70 75 80

Asp Ile Trp Asp Asn Met Thr Trp Met Gln Trp Asp Gln Gln Val Asn
85 90 95

Asn Val Ser Ser Ile Ile Tyr Asp Lys Ile Leu Glu Ala Gln Asp Gln
100 105 110

Gln Glu Glu Asn Val Arg Glu Leu Leu Glu Leu Asp Lys Trp Ala Ser
115 120 125

Leu Trp Asn Trp Phe Asp Ile Thr Asn Trp Leu Trp Tyr Ile Lys Ile
130 135 140

Phe Ile Met Ile Val
145

<210> 68

<211> 23

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 68

Asn Gln Gln Leu Leu Ser Leu Trp Gly Cys Lys Gly Lys Leu Val Cys
1 5 10 15

Tyr Thr Ser Val Lys Trp Asn
20

<210> 69
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: HIV Consensus Sequence

<400> 69
Gly Arg Glu Thr Leu Met Gln Asp Gln Gln Arg Leu Asn Ser Trp Gly
1 5 10 15
Cys Lys Gly Arg Ile Ile Cys Tyr Thr Ser Ala Arg Trp His
20 25 30

<210> 70
<211> 160
<212> PRT
<213> Human immunodeficiency virus type 1

<400> 70
Ala Ala Ile Gly Ala Leu Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser
1 5 10 15
Thr Met Gly Ala Ala Ser Val Thr Leu Thr Val Gln Ala Arg Leu Leu
20 25 30
Leu Ser Gly Ile Val Gln Gln Gln Asn Asn Leu Leu Arg Ala Ile Glu
35 40 45
Ala Gln Gln His Met Leu Gln Leu Thr Val Trp Gly Ile Lys Gln Leu
50 55 60
Gln Ala Arg Val Leu Ala Val Glu Arg Tyr Leu Lys Asp Gln Gln Leu
65 70 75 80
Leu Gly Phe Trp Gly Cys Ser Gly Lys Leu Ile Cys Thr Thr Val
85 90 95
Pro Trp Asn Ala Ser Trp Ser Asn Lys Ser Leu Asp Asp Ile Trp Asn
100 105 110
Asn Met Thr Trp Met Gln Trp Glu Arg Glu Ile Asp Asn Tyr Thr Ser
115 120 125
Leu Ile Tyr Ser Leu Leu Glu Lys Ser Gln Thr Gln Gln Glu Lys Asn
130 135 140
Glu Gln Glu Leu Leu Glu Leu Asp Lys Trp Ala Ser Leu Trp Asn Trp
145 150 155 160